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# A New Species of *Brongniartia* (Fabaceae: Faboideae) from Guerrero, Mexico

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**ABSTRACT.** A new species, *Brongniartia zirandarensis* (Fabaceae: Faboideae), from Guerrero, Mexico, is described and illustrated. Its affinities to *B. mollicula* Brandegees are discussed, and data are provided on habitat and abundance.

**RESUMEN.** Se describe y se ilustra una especie nueva, *Brongniartia zirandarensis* (Fabaceae: Faboideae), del estado de Guerrero, México. Se discuten sus afinidades con *B. mollicula* Brandegees y se proporcionan datos de su hábitat y abundancia.

*Brongniartia* is a neotropical genus nearly endemic to Mexico. Of the approximately 60 species from this genus, only two, *B. minutifolia* S. Watson (southern Texas) and *B. ulbrichiana* Harms (Bolivia), are found outside of this country. The Río Balsas Basin in southern Mexico is an important center of diversification for the genus. The state of Guerrero, with most of its territory included in this region, contains about ten species known from the genus; four of these are endemic to the state. Two new species were recently described from Guerrero, one endemic, *B. guerrensis* (Jiménez & Contreras, 1989), and the other distributed on the Río Balsas Basin, *B. montalvoana* (Dorado & Arias, 1992). During a systematic study of the Podalyrioides group of *Brongniartia* (Dorado, 1988), some specimens were collected in northern Guerrero that did not correspond with any of the previously known taxa. These collections are proposed here as representing a new species.

***Brongniartia zirandarensis*** O. Dorado, J. Bonilla & A. Burgos, sp. nov. TYPE: Mexico. Guerrero: Mpio. Zirándaro, "El Mirador," 17.6 mi. W of Zirándaro on dirt road to El Tamarindo, 2 Sep. 1991, O. Dorado, J. Bonilla & A. Burgos 2145 (holotype, MEXU; isotypes, ENCB, HUMO, MO, RSA, XAL). Figure 1.

*Brongniartia molliculae* maxime similis, sed differt ramis juvenibus glabratis, stipulis reniformibus versus ramorum basem, 8 vel pluribus foliis in ramis juvenibus, 17–21 foliolis per folium, bracteolis 2–3 mm longis, et calyce 0.9–1.3 cm longo.

Small shrub to 1.5 m tall, with grayish bark, the younger branches yellowish green and glabrous. Stipules (0.7–)1–2.3 cm long, (0.4–)1–2.2 cm wide, texture foliaceous or slightly coriaceous in older branches, glabrate or sparsely pilose, obliquely ovate or elliptic at end of branches and reniform at base of branches, persistent, venation conspicuous, especially at the upper surface, lower lobe present and forming a (5°–)35° to 80°(–90°) angle, with a cordate base, upper lobe present and forming a 90° to 135° angle, the edge of the stipule adjacent to the petiole excurvate, apex obtuse to rounded. Leaves 7.5–11(–17.5) cm long, glabrate; petiole 0.9–1.7 cm long, terete, glabrate; rachis 8.2–13(–14.7) cm long, glabrate, with 17–21 opposite or subopposite leaflets; stipels 0.6–0.8 mm long, commonly absent; leaflets 1.4–2.4(–2.8) cm long, 0.6–1.6(–1.8) cm wide, petiolule 1–2 mm long, glabrate, lamina elliptic or sometimes obovate, texture rather thin, glabrate, base acute or sometimes rounded, apex acute to rounded, with a mucro 0.5–1 mm long. Flowers borne solitary at the base of leaf-bearing nodes; peduncles (0.8–)1.3–2 cm long, erect, glabrate; bracteoles 2–3 mm long, 0.2–0.3 mm wide, yellowish, subulate, normally persistent, opposite, with some whitish hairs along the margin; calyx 0.9–1.3 cm long, 0.4–0.6 mm wide, sparsely pilose, campanulate, two vexilar lobes 7–8 mm long, 4.5–5 mm wide (both lobes), connate  $\frac{2}{3}$  of their length; lateral lobes 5.5–7 mm long, 2.5–3 mm wide, carinal lobe 6–7 mm long, 2–2.5 mm wide; standard 1.3–1.5 cm long, 2–2.3 cm wide, red, reflexed ca. 90°, widely obovate and becoming narrower at the base, slightly auriculate, the apex cleft to 2 mm, claw 4–4.5 mm long, 2–3 mm wide, strongly curved; wing petals 1.7–1.8 cm long, 0.65–0.7 cm wide,



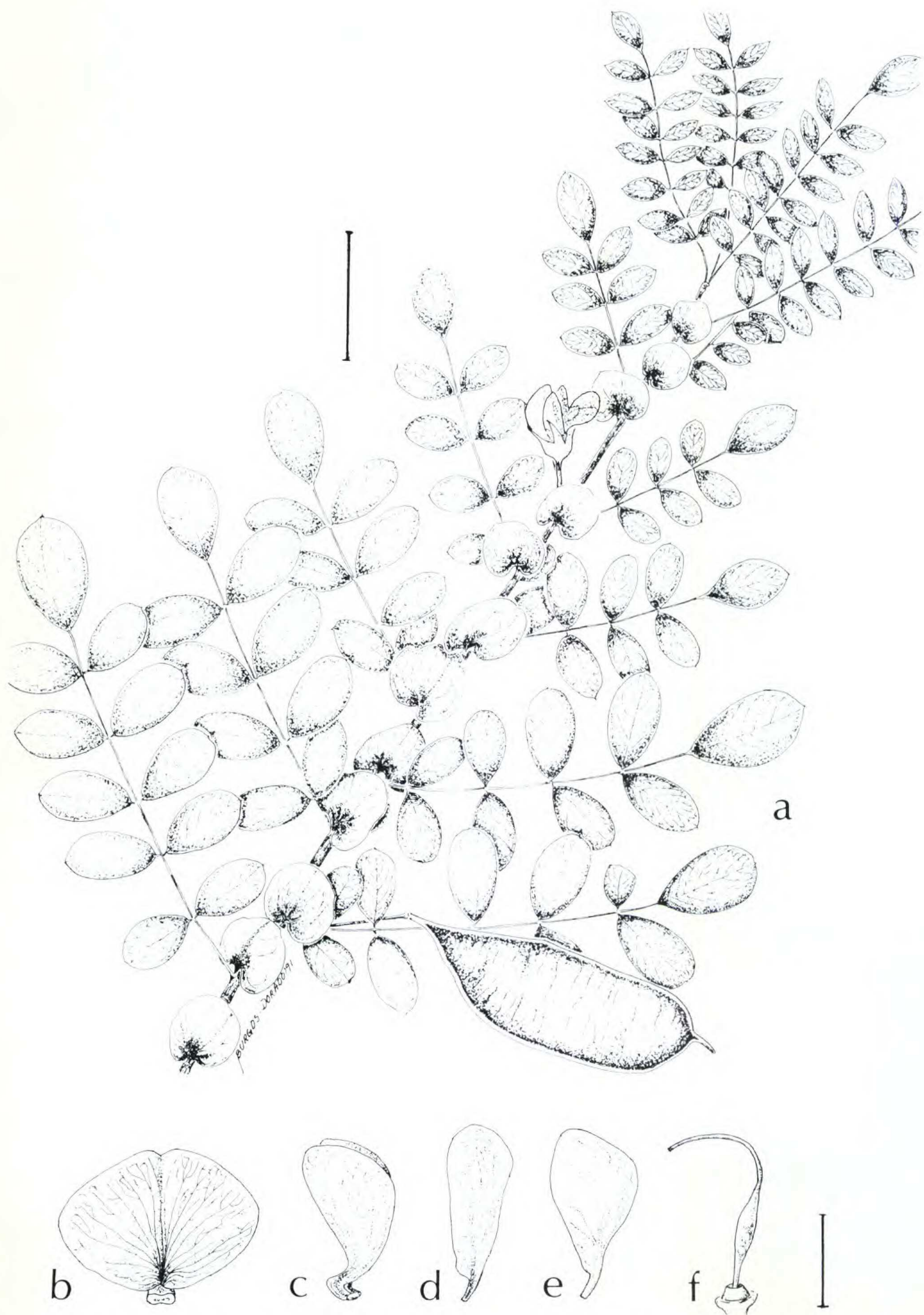


Figure 1. *Brongniartia zirandarensis* O. Dorado et al. (from O. Dorado et al. 2145). —a. Branch with flower and fruit. —b. Standard, front view. —c. Standard, face view. —d. Wing petal. —e. Keel petal. —f. Gynoeceium. Scale bar = 2 cm in a; 1 cm in b–f.



obliquely oblanceolate, red, claw 2–2.5 mm long, about 1 mm wide; keel petals 1.7–1.8 cm long, 0.9–0.95 mm wide, pinkish, lunate, the ventral face straight, claw 2.5–3 mm long, about 1 mm wide, auricula of the keel forming a 95°–110° angle with the claw; androecium 2.1–2.2 cm long, anthers 1.8–2 mm long; ovary about 0.7 cm long, glabrous, with an obconical staminal sheath 0.9–1.1 mm long at the base of the ovary, with 3–5 ovules, style 1.5 cm long, glabrous, sometimes slightly exerted from the keel. Fruit 4.3–5 cm long, 1.7–1.9 cm wide, oblanceolate, rather sessile, mucro about 3.5 mm long, usually with 3–5 seeds (only immature seeds known).

*Paratypes.* MEXICO. GUERRERO: Mpio. Zirándaro, “El Mirador,” 17.6 mi. W of Zirándaro on dirt road to El Tamarindo, 15 Dec. 1991, J. Bonilla, A. Burgos & J. Viana 2134 (HUMO, MEXU, MO, RSA).

*Brongniartia zirandarensis* is most similar to *B. mollicula* Brandege, a species distributed in southern Mexico, in the states of Puebla and Oaxaca. Both species share several morphological features, such as the presence of thin leaflets, short stipels (inconspicuous in most cases), presence of short, leafless, flowering branches (more commonly absent, the flowers then occurring at leaf-bearing nodes), and red to maroon flowers. However, the two species can be distinguished by several morphological characters. The leaves of *Brongniartia zirandarensis* bear 17–21 leaflets; the young branches are glabrous and bear 8 or more leaves with reniform stipules; the bracteoles are 2–3 mm long and the calyx is 0.9–1.3 cm long. Conversely, the leaves of *B. mollicula* bear 5–13 leaflets; the young branches are pubescent and bear fewer than 6 leaves, these with obliquely ovate stipules; the bracteoles are 0.2–0.6 mm long, and the calyx is (1.2–)1.4–1.7 cm long.

*Brongniartia zirandarensis* is known only from the type locality in tropical deciduous forest at 240

m. The dominant trees are *Acacia* spp., *Bursera* spp., *Caesalpinia pulcherrima* (L.) Sw., *Lysiloma tergemina* Benth., *Pithecellobium dulce* (Roxb.) Benth., *Jacquinia pungens* A. Gray, and *Cordia elaeagnoides* DC. The first collections of this species were made from about ten individuals growing on disturbed edges of a road cut. In a second search for more populations (J. Bonilla *et al.* 2134), fewer individuals were encountered. This was apparently due to recent road widening activity. Although the rarity of *B. zirandarensis* may be explained by the lack of explorations in the area, the low number of individuals suggests that this species may be one of the rarest of *Brongniartia*.

The specific epithet is derived from the nearby town of Zirándaro and pays homage to the friendly, helpful residents of that town.

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